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CRIMSON CLOVER FOR NORTH CAROLINA

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N. C. Agricultural Experiment Station, and
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AGRICULTURAL EXTENSION SERVICE

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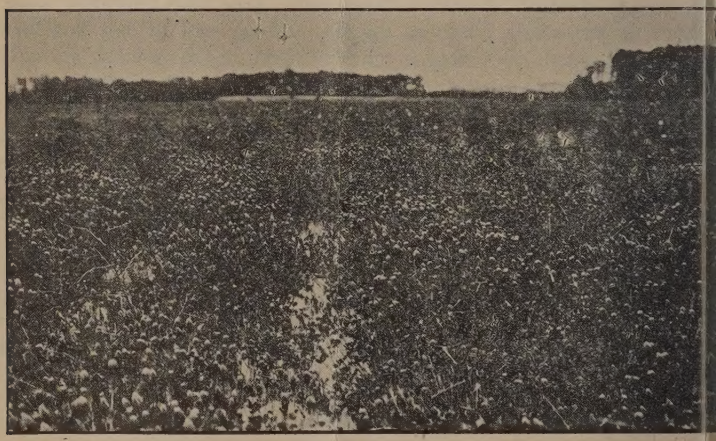
INOCULATION

Crimson clover seed should always be inoculated when sown on l
that has not recently grown a successful clover crop. Inoculation r
be accomplished by the use of inoculated soil or commercial cultu
The inoculated soil was first used in transferring the legume bacte
from one field to the other, and is still the surest method of gett
thorough inoculation the first year. The soil for inoculation is ta
from the surface six inches of a field *on which the same legume*
grown and formed nodules. This soil is scattered on the new field at



CRIMSON CLOVER SOWN IN COTTON AT LAST CULTIVATION

rate of 300 to 500 pounds per acre and then disked in. Small quant
of inoculated soil may be used by drying and sifting it over seed w
have been moistened with a 10 per cent glue solution.

This glue solution is made by mixing one pound of liquid furni
glue with one gallon of water, or one pound of dry glue to three gal
of water.

The dry inoculated soil is thoroughly mixed with the seed until
is covered with small particles of dirt. After drying rapidly, to pre
molding or injury of vitality, the seed are ready for sowing.

The pure or commercial cultures come in a liquid form, usuall
sufficient quantity to treat enough seed for planting one acre. T
cultures are always accompanied by directions, and it is usually be
follow them carefully, being sure that all of the seed are thorou
inoculated.

SEEDING

The cleaned seed should be sown at the rate of twelve to tw
pounds per acre, the date of seeding varying from August 15t
October 15th with the different sections of the State. In recent y

considerable amount of seed in the hull have been planted, and a large number of growers are partial to seed in hull, it being claimed that the seed in hull are less likely to germinate after a small shower, and therefore suffer less from drought in early fall. It is also thought that the seed in hull often carry a natural inoculation.

In general, the seeding of crimson clover may be made earlier on fertile soils than on poorer soils. Earlier plantings can also be made on better prepared seed-bed, since a good preparation protects the young plants from drought. If the clover is being grown especially for seed, a thinner seeding is preferable to the heavy seeding. The seed may be sown in corn, cotton, and tobacco as a catch crop, being lightly covered with a harrow or weeder. It will generally be found well to roll the looser soils immediately after covering the seed. As planting is done during hot weather, great care should be taken to provide a good seed-bed. When grown for soil improvement alone, and the entire growth is to be ploughed under green, rye is sometimes combined with the clover, at the rate of three pecks to twelve pounds of clover seed, putting the seed of each in separately.

ROTATIONS

Crimson clover should be grown as a catch crop, both for the purpose of enriching the land and for protecting it from washing during the winter and spring. It may follow a small grain crop or a cotton, corn, tobacco or truck crop, by being lightly harrowed or cultivated in between the rows of growing crops during August or early in September. It should be remembered, however, that crimson clover is not a good cover crop for sandy or clay lands, poor in organic matter or low in fertility. As nearly as possible, growers should try to sow the seed at the last cultivation of the crop in order to save labor. The crop may be ploughed under the following spring or cut for hay, and the stubble turned in time to grow a crop of corn or some other short summer crop. Cotton and tobacco cannot follow it in rotation. In this way a crop may be secured and the land greatly benefited by the turning under of a clover crop. It is frequently sown in peach orchards as a winter cover crop, since it completes its growth and may be ploughed under in the spring when the growth of the peach trees is beginning.

CRIMSON CLOVER FOR HAY

Usually one to three tons of crimson clover hay may be secured per acre. The hay is of good quality, being nearly equal to that of red clover when cut at the right stage. It is frequently difficult to cure, as the crop matures before the hot weather of summer and at the time of the year when showers are frequent. As it contains a less proportion of leaves, it will stand more rain than red clover.

The crop is ready to cut for hay when the earliest blooms begin to turn brown. The cutting should be done in the morning after the dew

has dried, and the plants should then be allowed to remain on the grou until thoroughly wilted, but not dry. They are then raked into win rows and thrown into cocks of small diameter, or placed on ventilat stacks for curing. This should take only a few days. Before hauli to the barn, the cocks should be opened well to insure thorough dryi in the middle.

TURNING CRIMSON CLOVER STUBBLE FOR CORN

The stiff hairs on the blooms of overripe crimson clover hay son times produce hair balls in the stomachs of horses and mules, and cau death when fed as exclusive roughage. To prevent this trouble, whe ever mature crimson clover is to be fed, it should be combined wi grass hay or corn stover. The hay of this clover does not deteriora as much nor the leaves shatter so badly as red clover when exposed sunshine and rain.

In removing crimson clover hay from a field, about one-third of t total nitrogen of the entire plant is left in the soil with the roots a stubble, the other two-thirds being contained in the tops and is remov as hay. A ton crop of crimson clover turned under would add more fe tility than 700 pounds of cottonseed meal and would have the addition advantage of adding a large quantity of organic matter to the soil.

SEED PRODUCTION

For seed, the clover should be cut when the heads have turned brov and during the morning when the heads are tough, in order to preve shattering. The clover is difficult to harvest for seed, as the seed po readily fall from the heads when ripe. Wet weather at the time maturity will sometimes cause the seed to sprout in the heads, as th dry very slowly after they are once thoroughly wet.

In recent years the seed have been high, due principally to the closing of European markets. A large number of domestic growers have produced their own seed, and some have found it possible to save seed for sale. Several methods of saving seed have been practiced. Different forms of home-made strippers are being used though the most successful method seems to be that of cutting the vines at maturity with a mowing machine and subsequently threshing out the seed.

GRAZING

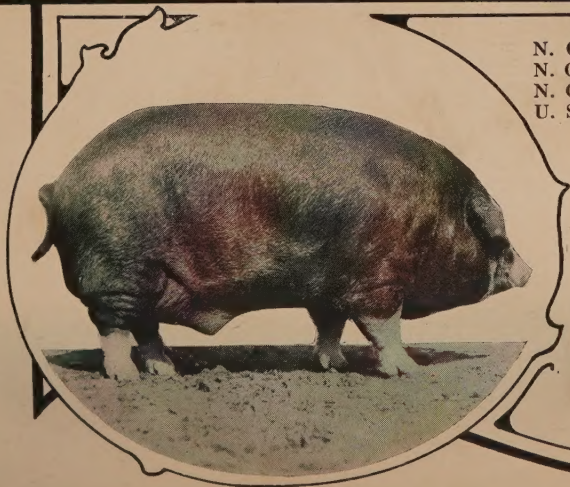
Crimson clover is prized highly as a pasture or grazing crop. When sown sufficiently early, it makes rapid and sufficient growth to supply considerable pasturage during the late fall and early spring, and more or less during the winter months in some of the milder sections. It makes earlier pasturage than any of the other clovers, and if grazed moderately may be cut later for hay or seed without materially lessening the yield for either. In this way considerable excellent grazing is provided for the animals at the time of the year when green feed is scarce. Care should be taken not to pasture too severely, as such would greatly injure and tend to destroy the clover. It cannot be used for permanent pasture, as its growth ceases with blooming. Crimson clover pasture is relished by all kinds of stock, but it is especially valuable for grazing hogs, cows, sheep, and poultry.

For further information address Division of Agronomy, Agricultural Extension Service, West Raleigh, N. C.

Reprint and revision of Extension Circular No. 15, North Carolina Extension Service, Division of Agronomy, October, 1919.

BETTER SIRES

Make Bigger Profits



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INTRODUCTORY STATEMENTS

None of us needs to be told that improved breeds of animals and fowls are more profitable to the individual and to the State than are the razor-backs, scrubs, and mongrels; that an animal carrying beef blood in its veins sells for more than one not carrying this kind of blood; that a dairy cow identified with one of the prominent dairy breeds produces more and better and cheaper milk and butter than does the one not so identified; that one of the improved breeds of hogs produces more and better and cheaper pork than does the razor-back; that the standard varieties of fowls, when compared with the mongrels, yield the higher quality of eggs and the greater quantity of good flesh.

We all know all of these things. But some of us have not translated The butcher wants a steer lown down, square, thick fleshed and fat. If you are using a scrub sire can you ever expect to produce such animals?

The answer is "No," because such sires do not possess the low down, blocky, thick-set form. A beef bull breeds into his calves what has been bred into him for generations. If this is scrub blood he will breed scrub calves. If it is good blood he will breed good calves.

The market wants thick, meaty steers and will pay a premium for them. The right kind of a sire will put the meat over the back, loins and in the thighs. This is what the butcher looks at when he buys a steer.

If you are using a scrub sire you are producing steers that are small in size, thin fleshed over the back and loins, and which usually have a large paunch. This is cheap meat and sells for a low price.

our good knowledge into practice. We therefore find too many inferior animals in the State, too many herds and flocks headed by inferior males. Right now when the world needs more meat, milk, butter, cheese, eggs, and wool is an appropriate time to improve our animals and fowls by purchasing males carrying good blood in their veins.

DAN T. GRAY,
Chief, Animal Industry Division,
North Carolina Agricultural Experiment Station and Extension Service.

GOOD BEEF SIRES PAY

Some men breed beef cattle for pleasure, but most men breed them for profit. If you expect to make profit you should breed what the butcher wants, who is the final judge of all block animals.

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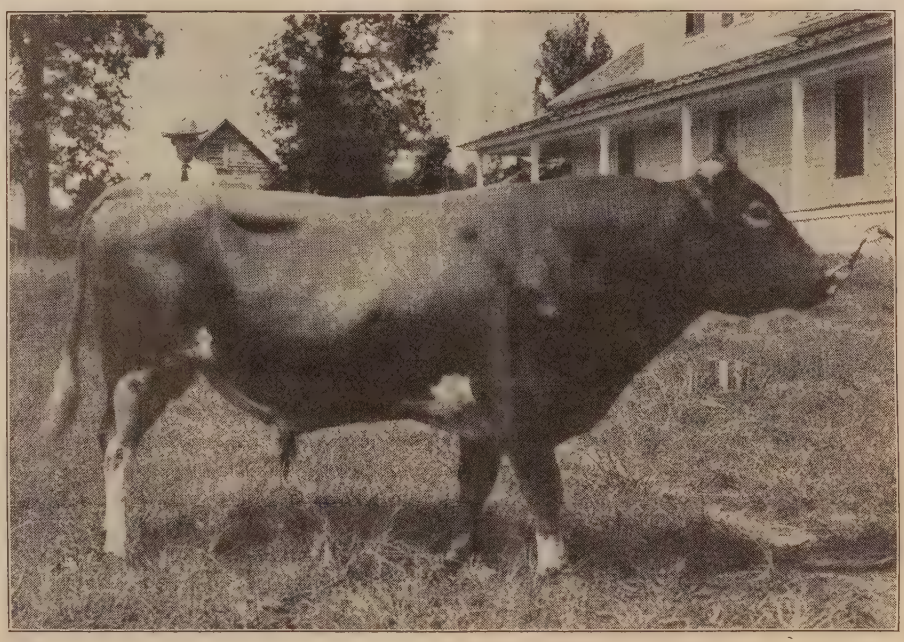
Can you afford to continue this practice? Not if you expect to put your business on the same plane as the banker. If you do not have ready money most banks will loan you a sufficient amount to purchase a good beef sire.

See your County Agent or write the Office of Beef Cattle and Sheep, West Raleigh, N. C.



A GOOD DAIRY SIRE

Will increase the milk production.

Will increase the fat production.

Will enable one to get more product from same amount of feed.

Will increase selling price of surplus stock.

All these will increase the net profit.

The milk production of heifers out of ordinary cows and sired by Holstein, Jersey, and Guernsey bulls increased over that of their dams by 64 per cent. The fat production increased by 52 per cent.

The second generation increased in milk production over the original cows 130 per cent. In fat production 109 per cent.

See your County Agent or write the Office of Dairy Farming, West Raleigh, N. C.

A GOOD SIRE

WHAT IS HIS VALUE?

His pigs will average twenty-five pounds more mature weight on the same amount of feed.

The average number of pigs in a litter is seven.

The most profitable sow farrows two litters per year.

WE FIGURE:

25 lbs. $\times$ 14 pigs = 350 lbs. pork @ 12c = $42 per sow per year.

TEN SOWS:

25 lbs. $\times$ 140 pigs = 3,500 lbs. pork @ 12c = $420.

HE IS GOOD FOR FIVE YEARS SERVICE. THEREFORE,

25 lbs. $\times$ 700 pigs = 17,500 lbs. pork @ 12c = $2,100.

HE CAN READILY SERVE THIRTY SOWS. AND SO WE HAVE:

25 lbs. $\times$ 2,100 pigs = 52,500 lbs. pork @ 12c = $6,300.

SIX THOUSAND THREE HUNDRED DOLLARS

Three per cent of the above is $189. He can be bought for less.

See your County Agent or write The Swine Extension Office, West Raleigh, N. C.

GOOD RAMS PAY DOUBLY
Improvement in the lamb means better meat and more wool

BETTER LAMBS COME FROM USING BETTER RAMS

The sheep market is paying today $10.00 per hundred for common lambs and $15.00 per hundred for choice lambs.

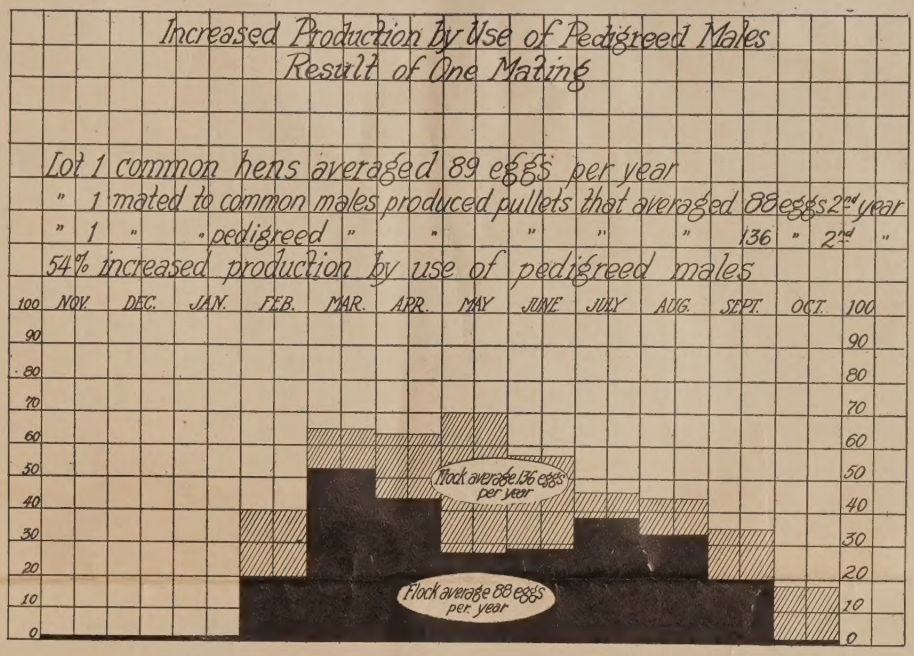
A good ram increasing the value of each lamb one dollar per head in a flock of fifty sheep will pay for himself the first year. The difference between a common lamb and a choice lamb is five dollars per hundred weight under present-day market conditions.

At the Iredell Test Farm located at Statesville, N. C., the use of a good pure-bred Hampshire ram increased the wool production in the flock of grade ewes from 5 pounds per animal to 8¼ pounds per animal the first cross. The improvement in mutton form was such as to add five cents per pound to the value of the lambs which carried 50 per cent more weight than lambs from scrub rams.

The average sheep of North Carolina shears about 3½ pounds of wool. A good ram is more than half the flock, which accounts for the fact that a large part of the improvement in sheep is due to the ram.

A scrub ram never has and never will pay.

See your County Agent or write the Office of Beef Cattle and Sheep, West Raleigh, N. C.


Increased Production by Use of Pedigreed Males
Result of One Mating
Lot 1 common hens averaged 89 eggs per year
" 1 mated to common males produced pullets that averaged 88 eggs 2nd year
" 1 " " pedigreed " " " " " 136 " 2nd "
54% increased production by use of pedigreed males
NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT.
100 90 80 70 60 50 40 30 20 10 0
Flock average 136 eggs per year
Flock average 88 eggs per year

Showing graphically the increased production of eggs by use of pedigreed males. North Carolina Experiment Station.

The black blocks show the quantity of eggs laid each month by the hens from the common hens bred to common males. The light area shows the quantity of eggs laid by the hens from the common hens bred to pedigreed males, that is, these hens from pedigreed males laid the total quantity of eggs indicated by both the black and light areas. Note that when you increase egg production by breeding that you get more eggs when eggs are a high price.

IT PAYS TO KEEP PURE-BRED CHICKENS

It is a mistaken idea that scrubs are more hardy than pure bred. Pure bred are hardy if only those are kept who are of good constitutional vigor.

Pure-bred poultry pays because it produces a uniform product in the form of eggs and meat. These when sold on a market where poultry and eggs sell according to quality will bring more than products that are not uniform.

Do you keep pure-bred poultry, grades, or scrubs? If you keep scrubs and cannot change at once to pure bred, **get a pure-bred male** for your flock—he will improve it.

The above chart shows the results of one mating of common White Leghorns with a pedigree male. Flock 1, common hens, were bred to common males and produced Flock 2. The following year Flock 1, the common hens, were bred to a pedigreed male, that is, a male from a high producing hen, and the pullets from this mating were Flock 3. Flock 1 laid an average of 89 eggs per hen yer year; Flock 2 an average of 88 eggs per hen per year, and Flock 3 an average of 136 eggs per hen per year, or an increase production of 54 per cent in one year by using a high production male.

You can do this if you try. Do it this year.

See your County Agent or write the Office of Poultry Investigations and Pathology, West Raleigh, N. C.

WHY DO GOOD SIRES PAY?

Because they transmit their good qualities to their young

WHAT ARE THESE GOOD QUALITIES?

Uniformity of product
Better quality of product
Increased production in
Meat
Milk
Eggs
Wool

WHY DO THEY TRANSMIT THESE GOOD QUALITIES?

Because of long and careful selection of animals for these qualities

WHAT IN ADDITION WILL THESE BETTER ANIMALS DO?

They will make more pounds of meat, eggs, wool, or milk than scrubs on the same amount of feed

WHY ARE THESE BETTER PRODUCTS PROFITABLE TO THE FARMER?

Because they command better prices

WHY DOES A SCRUB SIRE NOT PAY?

Because they cannot transmit these good qualities to their young, and, therefore, good prices cannot be obtained